

CLAIMS

1. (Previously presented) A therapeutic agent for treating diseases associated with an increase in radiation resistance or drug resistance of a cell, said agent comprising an isolated sequence comprising 5'-TCCATGGTGCTCACT-3' (SEQ ID NO:3) wherein said agent reduces radiation resistance or drug resistance of said cell.
2. (Original) The therapeutic agent of claim 1 wherein said agent reduces drug resistance of said cell and further wherein said drug resistance is a resistance to a chemotherapeutic agent.
3. (Previously presented) A method for reducing radiation or drug resistance of a human cell which does not overexpress *HER-2*, said method comprising introducing into said cell an antisense nucleic acid comprising a segment complementary to *HER-2* in an amount effective to reduce said radiation or drug resistance.
4. (Original) The method of claim 3 wherein said cell is a carcinoma cell selected from the group consisting of breast, bladder, prostate, head, neck, lung, colon, pancreas, cervical, ovarian, melanoma and stomach carcinoma cells.
5. (Original) The method of claim 3 wherein said antisense nucleic acid is introduced by association with a targeted liposome.

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~~6.~~ (Original) The method of claim 3 wherein said antisense nucleic acid comprises SEQ ID NO:3.
- ¹⁰
~~7.~~ (Original) A method for treating a person with a disease wherein said person is resistant to radiation or drug treatment of said disease, wherein resistance to said radiation or drug treatment is not a result of overexpression of *HER-2*, said method comprising administering to said person an antisense nucleic acid comprising a segment complementary to *HER-2* in an amount effective to decrease said resistance to radiation or drug treatment.
- ¹⁰
~~8.~~ (Original) The method of claim ¹⁰~~7~~ wherein said resistance to radiation or drug treatment results from a mutation in or overexpression of a gene selected from the group consisting of *sis* (PDGF- β); *trk*; *met*; *src*; *mos*; *protein kinase C β -1*; *ets-1*; *raf-1*; *Ha-ras*; *c-Fos*; *c-Jun*; *c-myc*; *Shc*; *Grb2*; *Sos*; *PLC γ* ; and a gene encoding ERK1, ERK2, MEKK, MEK1, MEK2, MAPK, SAPK, MAP2, MAP4, TNF- α receptor, EGF receptor, PKC- α , PC-PLC, PKC- ϵ , an RTK, a TCR-CD3, an STMR, a PTKs, or a G protein.
- ¹²
~~9.~~ (Withdrawn) The method of claim ¹¹~~8~~ wherein said gene is *Ha-ras*.
- ¹³
~~10.~~ (Withdrawn) The method of claim ¹¹~~8~~ wherein said gene is *raf-1*.
- ¹⁴
~~11.~~ (Original) The method of claim ¹⁰~~7~~ wherein said antisense nucleic acid comprises SEQ ID NO:3.

- ¹⁸
~~12~~. (Previously presented) A method for reducing radiation or drug resistance of a human cell which overexpresses *HER-2*, said method comprising introducing into said cell an antisense nucleic acid comprising a segment complementary to *HER-2* in an amount effective to reduce said radiation or drug resistance.
- ¹⁹
~~13~~. (Previously presented) The method of claim ¹⁸~~12~~ wherein said cell is a carcinoma cell selected from the group consisting of breast, bladder, prostate, head and neck, lung, colon, pancreas, cervical, ovarian, melanoma and stomach carcinoma cells.
- ²⁰
~~14~~. (Original) The method of claim ¹⁸~~12~~ wherein said antisense nucleic acid is introduced by association with a targeted liposome.
- ²⁴
~~15~~. (Original) The method of claim ¹⁸~~14~~ wherein said antisense nucleic acid comprises SEQ ID NO:3.
- ²⁵
~~16~~. (Original) A method for treating a person with a disease wherein said person is resistant to radiation or drug treatment of said disease, wherein resistance to said radiation or drug treatment is a result of overexpression of *HER-2*, said method comprising administering to said person an antisense nucleic acid comprising a segment complementary to *HER-2* in an amount effective to decrease said resistance to radiation or drug treatment.
- ²⁶
~~17~~. (Original) The method of claim ²⁵~~16~~ wherein said resistance to radiation or drug treatment results from a mutation in or

overexpression of a gene selected from the group consisting of *sis* (PDGF- β); *trk*; *met*; *src*; *mos*; protein kinase C β -1; *ets*-1; *raf*-1; *Ha-ras*; *c-Fos*; *c-Jun*; *c-myc*; *Shc*; *Grb2*; *Sos*; *PLC γ* ; and a gene encoding ERK1, ERK2, MEKK, MEK1, MEK2, MAPK, SAPK, MAP2, MAP4, TNF- α receptor, EGF receptor, PKC- α , PC-PLC, PKC- ϵ , an RTK, a TCR-CD3, an STMR, a PTKs, or a G protein.

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~~18.~~ (Withdrawn) The method of claim ²⁶~~17~~ wherein said gene is *Ha-ras*.

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~~19.~~ (Withdrawn) The method of claim ²⁶~~17~~ wherein said gene is *raf*-1.

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~~20.~~ (Original) The method of claim ²⁵~~16~~ wherein said antisense nucleic acid comprises SEQ ID NO:3.

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~~6~~ (Previously presented) The method of claim 5, wherein said targeted liposome comprises a complex of a ligand and a liposome comprising a mixture of a cationic lipid and a neutral lipid.

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~~22.~~ (Previously presented) The method of claim ⁶~~21~~, wherein said liposome comprises a mixture of dioleoyltrimethylammonium-propane (DOTAP) and dioleoylphosphatidylethanolamine (DOPE).

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~~23.~~ (Previously presented) The method of claim ⁶~~21~~, wherein said ligand comprises folate or transferrin.

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~~24.~~ (Previously presented) The method of claim ¹⁶~~7~~, wherein said antisense nucleic acid is administered via a targeted

liposome which comprises a complex of a ligand and a liposome comprising a mixture of a cationic lipid and a neutral lipid.

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~~25~~. (Previously presented) The method of claim ~~24~~¹⁵, wherein said liposome comprises a mixture of dioleoyltrimethylammonium-propane (DOTAP) and dioleoylphosphatidylethanolamine (DOPE).

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~~26~~. (Previously presented) The method of claim ~~24~~¹⁵, wherein said ligand comprises folate or transferrin.

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~~27~~. (Previously presented) The method of claim ~~14~~²⁰, wherein said targeted liposome comprises a complex of a ligand and a liposome comprising a mixture of a cationic lipid and a neutral lipid.

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~~28~~. (Previously presented) The method of claim ~~27~~²¹, wherein said liposome comprises a mixture of dioleoyltrimethylammonium-propane (DOTAP) and dioleoylphosphatidylethanolamine (DOPE).

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~~28~~. (Previously presented) The method of claim ~~27~~²¹, wherein said ligand comprises folate or transferrin.

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~~30~~. (Previously presented) The method of claim ~~16~~²⁵, wherein said antisense nucleic acid is administered via a targeted liposome which comprises a complex of a ligand and a liposome comprising a mixture of a cationic lipid and a neutral lipid.

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~~31.~~ (Previously presented) The method of claim ³⁰~~30~~, wherein said liposome comprises a mixture of dioleoyltrimethylammonium-propane (DOTAP) and dioleoylphosphatidylethanolamine (DOPE).
32. (Previously presented) The method of claim 30, wherein said ligand comprises folate or transferrin.